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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/336,363	06/17/1999	KOJI MATSUYAMA	FUJO16.216	7540

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EXAMINER

KIM, KEVIN

ART UNIT	PAPER NUMBER
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2634

19

DATE MAILED: 06/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/336,363

Applicant(s)

MATSUYAMA ET AL.

Examiner

Kevin Y Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 27, 2004 has been entered.

Claim Rejections - 35 USC § 112

2. Claim 16 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 16 further defines that "the first correlation determination is performed using the received signal that has not been stored in the storage unit." But nowhere in the disclosure of the present application is found an embodiment where the second correlation is performed using the stored received signal while the first correlation does not require the use of the storage unit. Furthermore, this limitation does not appear to have been suggested because it is contradictory to the purported benefit of the present invention, the removal of the effects of fading by the use of a stored received signal.

Page 13, lines 19-25.

Claim Rejections - 35 USC § 103

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3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 13-15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Sawahashi et al (US 5,768,306 previously cited).

Consider claims 13 and 17. The admitted prior art, depicted in Fig.1 and described “Description of the Related Art” of the present application shows a spread spectrum receiver/method that is used in a mobile station operating in a DS-CDMA communication system. The receiver performs a first correlation (1001) between a received signal and a pre-assigned spreading code (1012) and a second correlation (1005) between the received signal and a plurality of spreading codes (1006), based on the timing determined from the first correlation operation, page 8, line 18 – page 9, line 1. The admitted prior, though, fails to teach “a storage unit” for storing the received signal and “a control unit” using the stored signal for performing the first and second correlations.

Referring to Fig.4, Sawahashi et al discloses a sliding correlator used in a CDMA system for initial synchronization. A received signal is stored in a memory (43), col.6, lines 7-8, until a correct timing and PN sequence is identified. Specifically, the stored signal is read out from the memory at a rate higher than the chip rate under control of a control unit (41) and correlated with a pre-assigned spreading code. Col.6, lines 13-19. The phase of the spreading code is adjusted and correlated with the same received signal that is again read from the memory, until the correlation value exceeds a predetermined threshold. Col.6, lines 24-36. The storing of a received signal in a memory allows the same received signal to be repeatedly correlated with a

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spreading code, each time with a different phase, during one chip period so that a faster initial synchronization can be established. Col.6, lines 37-51.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to provide a storage unit, i.e., a memory, for storing the received signal in the prior art receiver and a control unit to read the received signal from the memory to correlators (1001 and 1005), which allows repeated correlation of the received signal with varying phases of a spreading code for the purpose of establishing a faster initial synchronization as taught by Sawahashi et al.

Regarding claim 14, all the subject matter identical to that of claim 13 has been discussed above, except for "determining which of the $N (>2)$ spreading codes is attributable to the base station that has transmitted the received signal." Page 10, lines 17- 22 describes determining a spreading used by a base station if the correlation value exceeds a predetermined value. In other words, one of spreading codes stored in the timing code storage circuit (1011) is identified as the spreading code after one or more correlation operations.

Regarding claim 15, all the subject matter identical to that of claim 13 has been discussed above. Further, since the memory circuit (43) of Sawahashi et al stores the received signal for the first and second correlation operations, it reads on the recitation "at least for performing the second correlation determination."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y Kim whose telephone number is 703-305-4082. The examiner can normally be reached on 8AM --5PM M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

kvk



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